High-tech road watch makes driving a breeze

BY MARK SKERTIC
The Cincinnati Enquirer

Della Swincher slipped on her headphones, took a sip of coffee and leaned toward the microphone.

"Westbound on I-275, you're looking at smooth conditions at I-74," she began with the voice that will launch a thousand trips.

Swincher, a former Sharonville police office who used to chase speeders, is now working to speed up traffic — or at least keep it flowing around accidents, construction zones and other clogs.

She's the voice of SmarTraveler, a system that lets callers get up-to-the-minute traffic information within the Interstate 275 loop. The $33 million system was unveiled Wednesday morning by federal and state transportation officials.

At the touch of a touch-tone phone — from home or car — callers can get current traffic information from 21 segments of the Greater Cincinnati expressway system.

The coverage area includes I-71 to Kings Island and I-71/75 to Ky. 18. Information also is available on bus travel, airport limousines and car pooling.

It's the second such system in the country; Boston has had one since 1993.

Both are attempts by the federal government to shift highway efficiency into high gear, speeding travel while reducing accidents, fuel consumption and auto emissions.

A new era in transportation technology means officials are embracing ways to increase travel times in the same way they've always planned road projects, Paul Toussaint, administrator for the Kentucky division of the Federal Highway Administration, told a roomful of local transportation officials.

"We're confident (when) building bridges and laying more pavement," he said. "We're not always as confident adding new technology."

Toissant spoke from the nerve center of SmarTravel, a layout that looks like a sliver of a NASA control room.

Fifteen television screens fill one wall, showing cars zipping along local interstates. Cameras are on utility poles and atop schools; one is perched on Riverfront Stadium. Eight scanners monitoring 300 police and public agency frequencies squawk nearby. Twice a day, a plane takes off from Blue Ash Airport to provide a bird's-eye view of traffic patterns.

The heart of the operation is a constantly updated database of construction and roadways information, said Robert Bross, director of operations. Information is added from a variety of sources, including bus drivers who note an accident or unexpectedly closed street.

"We've even got the Reds schedule programmed in here, so we can anticipate those traffic delays," Bross said.

The program is the first phase of Greater Cincinnati and Northern Kentucky's Advanced Regional Traffic Interactive Management System (ARTIMIS).

Future phases will add more than 60 cameras to track traffic flow and 44 message signs to give drivers traffic advisories. The operation is already planning to move from its third-floor office at One Centennial Plaza downtown to Third Street.

The $33 million covers the cost of operating the system from its inception in 1987 through September 1998.

Ohio has provided $24 million from its federal transportation allotment. Kentucky has picked up $9 million of the bill, paying for 80 percent of its share with federal funds. The work has had the backing of the Ohio-Kentucky-Indiana Regional Council of Governments.

Like her co-workers, Swincher is cross-trained to do any of the jobs.

She stands as she talks — "I don't like to sound slouched over" — updating the traffic report in a breezy voice. Once all the reporters and bosses are out of the office, she admits, she'll probably kick off her shoes.

"All I have to do is talk clearly and into the microphone," Swincher said, pulling on her headphones again. "This is a lot more fun than writing tickets."

About SmarTravel

▶ **What:** Up-to-the-minute travel information on major roadways within the Interstate 275 loop, 6 a.m. to 7 p.m. Monday through Friday. Information on special events and construction 24 hours a day. Also: information on bus schedules, airport shuttle services and car pools.

▶ **How to connect:** Call 333-3333 on a touch-tone telephone or 311 on any cellular phone.

▶ **How to check routes:** After calling the main number, use the appropriate code:

▶ For I-275 between Cincinnati/Northern Kentucky International Airport and I-74: punch in 2751*

▶ I-275 between I-74 and I-75: 2752*

▶ I-275 between I-75 and Montgomery Road: 2753*

▶ I-275 between Montgomery Road and I-471 in Northern Kentucky: 2754*

▶ I-275 between I-471 and Cincinnati/Northern Kentucky International Airport: 2755*

▶ I-74 between I-275 and I-75: 74*

▶ I-471 between downtown and I-275 in Northern Kentucky: 471*

▶ Norwood Lateral/Ohio 562 between I-75 and I-71: 562*

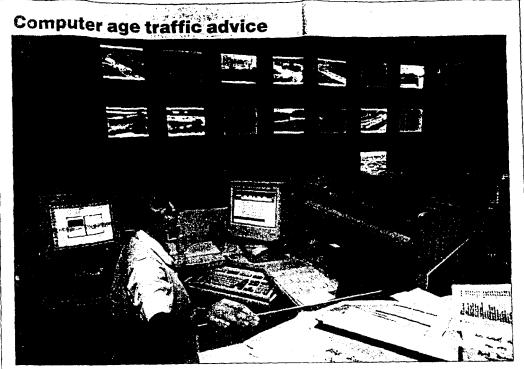▶ I-75 between Tylersville

The Cincinnati Enquirer/Ernest Coleman
Traffic manager Della Swincher works in the SmarTravel control room downtown.

Road and I-74: 751*

▶ I-75 between I-74 and the Ohio River: 752*

▶ I-75 between the Ohio River and Ky. 18 in Florence: 753*

▶ I-71 between Kings Island and Taft Road: 711*

▶ I-71 between Taft Road and the Ohio River: 712*

▶ I-71 between the Ohio River and Ky. 18 in Florence: 713*

▶ Ronald Reagan Cross County Highway between Galbraith and Montgomery roads: 774*

▶ Downtown, including Fort Washington Way, River Road, Columbia Parkway and the bridges: 1*

▶ Metro bus information: 91*

▶ TANK bus information: 92*

▶ Jetport Limousine information: 93*

▶ Rideshare information: 94*

▶ Transportation to and from special events: 99*

© WEDNESDAY, JUNE 28, 1995

Computer age traffic advice

M. EDWARD LYONS for The Kentucky Post

Elizabeth DeCordova, traffic manager at the SmarTravel control center, monitors traffic by listening to police scanners and watching television screens. Fifteen cameras around the region provide a panoramic view of travel routes.

Driving gets a little easier

Now you can dial up SmarTraveler and find out about delays

By Monica Dias
Kentucky Post staff reporter

Beginning today, you can get up-to-the-minute traffic conditions on major highways with one phone call.

Dial 333-3333 from a Touch-Tone phone or 311 on a cellular telephone and you'll learn whether traffic is flowing well or whether an accident has blocked a highway.

You'll find out how long it should take to drive, say, from the Ohio River to Florence.

You can also get schedule information for TANK and Metro buses, airport shuttles and car pools.

The $4 million system, called SmarTraveler, is a joint project of Kentucky, Ohio and the federal government. The system's designers say it will save travelers time, fuel and frustration.

Fifteen cameras mounted on structures such as Heather Hill Apartments in Covington, Riverfront Stadium and a utility pole at the Cincinnati/Northern Kentucky International Airport provide workers in a downtown Cincinnati office with a panoramic view of 16 travel routes.

During peak hours, workers in an airplane and a network of drivers will report traffic conditions to the control center, where more workers will record the information into the phone system.

Call the number, punch in your route — for example, 471 and the star key for I-471 — and a recording will tell you how busy the road is and offer a detour if necessary.

The call is free. There are no airtime charges for Ameritech and CellularOne, although CellularOne will re-evaluate that policy after Sept. 30, said Eli Sherer, the vice president of operations for SmartRoute Systems, the company that's running the system.

The information is updated continuously from 6 a.m. to 7 p.m. Monday through Friday. The updates occur every 20 minutes if the road is calm and much more frequently if there's an accident, Sherer said.

SmartRoute Systems, of Cambridge, Mass., has operated a similar system in eastern Massachusetts since 1993. That system averages 100,000 phone calls a month, Sherer said.

SmarTraveler is part of a $33 million high-tech system that will begin operating next year to help traffic flow more smoothly around interstate highway construction projects and accidents.

The system will cover 88 miles of local highway. Vehicles would drive over sensors embedded in the highway. The sensors, in turn, would signal the central office if traffic slowed.

Closed-circuit television cameras would show whether a wreck or some other problem had caused the traffic jam. Workers in the central office would transmit messages to electronic signs along the interstate highways to give detour directions to motorists.

Currently, the central office is located on Central Avenue in downtown Cincinnati. Next year it will move to a new building beneath the ramps to the Brent Spence Bridge in Cincinnati.

Updates on traffic just a call away

Beginning today motorists can get up-to-the-minute traffic conditions on major highways in Greater Cincinnati with one phone call.

Dial 333-3333 from home or 311 on a cellular telephone to learn whether traffic is flowing well or whether an accident has blocked a highway.

The number also will offer schedule information for Metro and TANK buses, airport shuttles and car pools.

The $4 million system, called SmarTraveler, is a joint project of Kentucky, Ohio and the federal government.

The system's designers say it will save travelers time, fuel and frustration.

Fifteen mounted cameras, as well as rush-hour reports from airplane observers and drivers, will monitor some 16 travel routes.

Call the number, punch in your route — for example, 471 and the star key for I-471 — and a recording will tell you how busy the road is and offer a detour if the highway is blocked.

The information is updated continuously from 6 a.m. to 7 p.m. Monday through Friday. The updates occur every 20 minutes if the road is calm and more frequently if there's an accident.

Ohio-Kentucky Region Initiates Traffic Advisory System

Will Use Three-Digit Telephone Number

The Kentucky Transportation Cabinet (KYTC) and the Ohio Department of Transportation (ODOT) will initiate the second Traffic Advisory Telephone System (TATS) in the U.S. on June 28. SmarTraveler in Boston is the nation's first operational test of an Intelligent Transportation System (ITS) and both of these projects are focused on providing up-to-the-minute traffic and transit information in a real world environment.

TATS is part of the overall Regional Traffic Management System, called ARTIMIS, for the Cincinnati-Northern Kentucky area. Although the basic system is still in the planning stages, the telephone advisory system can operate independently, so KYTC and ODOT decided on early implementation. Presently, TATS supplies ongoing traffic information that is updated as incidents occur. Telephone calls accessing information now average about 4,000 daily.

KYTC is looking to obtain the first three-digit number ever awarded to provide telephone information to travelers in lieu of a seven-digit number for the TATS. If awarded, they will use "311" for the service.

When finally in place, ARTIMIS is expected to improve air quality, overall safety, and motorists' travel time. Its key capabilities will include the following:
• pre-trip travel information

Please turn to Page 16

SmarTraveler in Boston

SmarTraveler is an "Advanced Traveler Information Service". Residents of eastern Massachusetts can obtain up-to-the-minute, location-specific traffic and transit information at any time, by dialing 374-1234. In addition, SmarTraveler is available to area cellular phone customers.

SmarTraveler started in 1992 as a Federal Highway Administration "operational test" funded 50% by the Federal Highway Administration with a matching 50% contributed by private companies and other public sector agencies. The total annual cost of the SmarTraveler project is $3 million. In 1994, SmarTraveler became a program of the Massachusetts Department of Transportation.

The service area for SmarTraveler is eastern Massachusetts, approximately delineated by (and including) Route 495. The service area includes approximately 1,400 square miles, encompassing 122 cities and towns and an estimated 2.9 million licensed drivers. Eighteen separate roadways or roadway segments totaling 701 miles and carrying 1.7 million vehicles daily are included in the SmarTraveler monitoring and reporting.

Additionally, SmarTraveler covers the MBTA commuter rail (Amtrak), bus and subway systems. About 663,000 people within the coverage area travel daily via public transit, 587,000 on light rail and/or bus, and 76,000 on commuter rail.

In calendar year 1993 SmarTraveler received 666,000 calls. In calendar year 1994, the number of calls increased to 1,201,000.

U.S. Secretary of Transportation Federico Pena paying a visit to the SmartRoute Systems Headquarters in Boston. (Left to right) Pena with Greg Gamble and David Stein of SmartRoute Systems.

Ohio-Kentucky
Traffic Advisory

- en-route driver information
- route guidance
- incident management
- congestion management
- traffic control

Kentucky and Ohio plan to enhance the system in the future with expanded coverage, ramp metering, tie-in major arterials, information kiosks, tie-in public transit, and automated vehicle identification.

For more information contact Leon Walden, Project Manager, at tel. (502) 564-7433

ITS AMERICA NEWS

Informed Public Will Use Travel Alternatives, Survey Finds

A recently conducted survey of the SmarTraveler operational test in the Boston metropolitan area highlights the potential benefits cities and regional planning organizations can reap from Advanced Traveler Information Systems (ATIS) if they can overcome one significant obstacle.

According to preliminary findings of the evaluation, which was sponsored by the Massachusetts Highway Department, there is tremendous inherent potential, when traveler information services are used, to influence the public's travel-related decisionmaking processes. An ancillary result is reduced traffic congestion and air pollution, the survey found.

But first, the public must transcend a "behavioral threshold that allows them to use the services," says Steve Crosby, chairman and CEO of SmartRoute Systems of Cambridge, Mass. and an ITS America member, which provides SmarTraveler services. "The research is clear that if enough people use these services, there will be an impact," he says.

"The challenge is to get people to use SmarTraveler enough that they begin to change their thinking and their behavior," says Crosby. "The challenge is to get people to remember our telephone number and then to think to use the service."

SmarTraveler provides "real time comprehensive traffic flow information on 700 miles of roads in the Boston metropolitan area," which customers access through a telephone call, says Crosby. The service will also suggest alternative routes for drivers, where they are available, he adds.

Real time information on public transit (bus, subway and commuter rail) running times is also available. The service will also suggest alternative modes of travel to the same destination, he says.

In all, 2,000 SmarTraveler users were surveyed, Crosby said. The findings suggest that travelers, armed with

timely information, will consider alternatives to their original travel plans. The findings include:

● 49 percent said the information they received during the particular call they were being questioned about played a direct role in their travel decisionmaking;

● 29 percent said they changed their travel behavior as a result of the information provided by the service;

● 14 percent changed the time of their departure;

● 12 percent used a different route;

● 2 percent canceled their trip;

● 1 percent changed their route and time;

Drivers will change their travel plans if sufficiently informed of traffic conditions, a recent survey found.

● 1 percent changed from a private vehicle to public transit

● 20 percent said they used the information to choose between two or more relatively equal alternative routes;

● Most of the rest of the callers used the information in some way to verify that their preferred route was viable;

● 8 percent said they contacted others to inform them they would be delayed.

While it will take time for customers to change their travel behavior, Crosby said, the survey turned up virtually no resistance to the service. "We found very high acceptance [of the services]," he said. "Consumers just have to be assured that the data we provide is timely and accurate."

Toward that end, SmartRoute has launched a "modest" television and radio advertising campaign, run promotional campaigns with public agency partners and distributed fliers and cards, said Crosby "We're doing everything we can think of to remind people that this service is available," he adds.

Those travelers who presently use the service (as many as 20,000 a week by Crosby's estimates):

● 97 percent expect to use the service again;

● 85 percent rated the service an "8" on a scale of "10";

● 68 percent said the service helped them reduce travel-related frustration and stress;

  ●67 percent said SmarTraveler provided them with all types of information they desired from an ATIS.

  ●63 percent said the service helped them avoid traffic problems.

  ●59 percent said they saved time;

  ●51 percent said they were aided in arriving on time at their destination.

An environmental impact study conducted by Tech Environmental, Inc. of Cambridge, Mass., supported SmartRoute's contention that increased use of SmarTraveler would result in reduced automobile exhaust emissions, Crosby said. The Tech Environmental report was underwritten by SmartRoute.

Widespread use of SmarTraveler throughout the Boston metropolitan area, the Tech Environmental report concluded, could eliminate nearly 1,000 pounds of Volatile Organic Compounds from the air daily. This is almost 7 percent of the projected requirement from new Emission Reduction and Highway Operations, Transportation Control Measures that remain to be implemented.

SmarTraveler began life as the first operational field test funded by the Federal Highway Administration under ISTEA of 1991.

ENTERPRISE

SmartRoute: In the right direction

photo by Tsar Fedorsky

John Liebesny, left, and David Stein of SmartRoute Systems help Boston area drivers find the right way.

by CATHRYN J. PRINCE
JOURNAL STAFF

For drivers tired of the parking lot-like nightmare on the Tobin Bridge or the gridlock in Kenmore Square after a Red Sox game, help is at hand.

SmartRoute Systems, a Cambridge-based company, has developed a way to guide motorists around the trouble spots. The means? SmarTraveler, a free, up-to-the-second traffic and public transit report that users can call either before or during their trip. The report includes real-time travel conditions, as well as alternate route and transit options.

"The seed for the idea grew out of frustration from driving [Route] 128 everyday," said John Liebesny, 46, the company's president and CEO. "I thought: Wouldn't it be neat if you're in the car and as you're coming to Route 128 you could find out whether to continue to Route 2 or crossover to [Route] 9? Wouldn't it be nice to just push a button and get an answer?"

Founded in 1988, the privately held company is a leader in designing, developing and deploying Intelligent Vehicle Highway Systems, or IVHS.

Liebesny, an electrical engineer with an M.B.A. from the Harvard Business School, worked for Hewlett-Packard Co. for 10 years before starting SmartRoute. SmarTraveler was launched on Memorial Day 1991.

The company has raised $4 million from individual investors. It had revenue of $1.5 million in 1993 and has nearly doubled that in just the first half of this year, bringing in about $2.9 million, said David Stein, 43, the company's executive vice president.

Commuters can dial the service for the cost of an ordinary phone call to Cambridge. The phone number is (617) 374-1234. The company receives no revenue from the phone calls. Its money comes from providing traffic reports to WCVB-TV, Channel 5, and WODS-FM, as well as contracting with other entities—so far in Ohio, Kentucky and Indiana—who need traffic info.

TRAFFIC

"We were looking for reliable, up-to-date in-travel information and we feel they do a good job of that," said Neil Ungerleider, managing editor of WCVB-TV. "Primarily they do reports for our Eye-Opener news show between 5 a.m. and 7 a.m. and the 6 p.m. news on Friday. And if there's a big traffic problem during the middle of the day, they'll do some reporting for us."

In addition, SmartRoute, which has 30 employees, was recently awarded a subcontracting role by the I-95 Corridor Coalition to design Traveler Information Systems.

The Federal Highway Administration also has invested more than $2 million into the program as part of its ongoing exploration of ways to ease traffic flow in cities across the country.

"Our program focuses on the development and implementation of IVHS user services to help users of the transportation system get better information before and during their trip," said Matt Miller, a transportation engineer with the Federal Highway Agency. "So this SmarTraveler project was kind of a unique way to deliver real-time conditions to travelers."

Inside its office, SmartRoute operators monitor traffic conditions on 701 miles of road within Route 495 by watching 10 black-and-white video screens. The call-in system can handle up to 6,000 calls in an hour.

"In some ways we provide market information to people," Stein said, so they can "make a good transportation decision before leaving for the office, or their home. They can find out if the Green Line is broken down at Kenmore Square or if Storrow Drive is hopelessly congested."

Aside from the Cambridge office, SmartRoute uses the first floor of an old Wang Laboratories building in downtown Boston to deal with complaints regarding construction on the Central Artery. The center operates 24 hours a day, seven days a week.

The company collects traffic information in a variety of ways. Video cameras have been mounted in 50 locations in the greater Boston area, including the Sagamore and Bourne bridges—the entrances into Cape Cod.

In addition, SmartRoute Systems leases airplane time and has enlisted the service of Logan Airport's Massport buses to monitor the airport's traffic.

The system also can help before people leave for destinations. Events like presidential visits, Red Sox games, and road construction sites are reported, to let people know where trouble lurks.

"About 30 percent to 40 percent of congestion in a metropolitan area like Boston is because of stuff you can know about ahead of time," Liebesny said.

It has been challenge to increase the number of SmarTraveler users, simply because the concept is so unfamiliar, said Stein, who likens the service to creating awareness about automatic teller machines.

But thanks to a publicly financed advertising campaign, the company's call count is up 158 percent during the first six months, to nearly 1.2 million users.

To see how users like the service, the Massachusetts Highway Department began a study 18 months ago. The department has followed up on an average of 100,000 calls placed to SmarTraveler each month. Preliminary reports indicate an overall satisfaction with the service.

The service had a direct influence on the travel decisions of 47 percent of the respondents. Of those surveyed, 8 percent said they were sufficiently alerted to be able to call ahead to jobs or appointments to say they would be delayed.

Ninety-seven percent said they expected to use the service again, and 85 percent said they rated the service an 8 on a scale from 1 to 10. Sixty-eight percent of the service's users said they were less frustrated as a result about traffic conditions and 63 percent said they were able to avoid a traffic problem because of the service.

Future plans call for developing a navigational information system that could give a caller the best route possible between two points, given the traffic conditions at the time of the call. The company is looking at new means of disseminating information like pagers and interactive cable.

"Maybe someday you'll turn on your PC at work and check how the traffic is on Summer Street before leaving your downtown office," Stein said.□

The National Highway System Needs IVHS

By Rodney E. Slater, Federal Highway Administrator

The central issue facing the deployment of intelligent vehicle-highway systems (IVHS) in the coming years is, I believe, mainstreaming the use of technology to help the nation achieve important transportation and societal goals.

For example, how can we use technology to help us achieve the goals presented to us in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, such as intermodalism, transportation efficiency, and the establishment of a National Highway System (NHS)? How can we use technology to help us meet the goals for clean air, established under the Clean Air Act Amendments (CAAA) of 1990? In addition, how can we use technology to help us respond to other important societal goals, such as accessibility to jobs, productivity, and safety?

Most of us here at the Federal Highway Administration believe that IVHS can help us answer these questions. But we need to accelerate our efforts....

. . . While not all the benefits are visible at present, we have seen enough accomplishments resulting from IVHS operational tests to be encouraged. For example, the investment in the TravTek operational test of route guidance in Orlando, Fla., spawned several innovative systems and products that are in use by the City of Orlando and the State of Florida to manage traffic better and provide improved traveler information.

As a result of research conducted under California's IVHS research program and supported with federal funds, new vehicle warning systems have been developed and are being used on the entire fleet of Greyhound buses. We are learning from the SmarTraveler operational test in Boston that people appreciate the value of real-time travel information to know about the incidents, construction, and transportation services. We also know from this project that the market for information grows as travelers experience the benefits that they can derive from it.

Over the next several years, we will show from these projects that there are real benefits from IVHS technologies. More importantly, we need to show that the technologies are not solutions looking for problems. Our outreach, our technology transfer, and our technical assistance programs will help in this regard.

REMARKS PREPARED FOR DELIVERY

DEPUTY SECRETARY OF TRANSPORTATION
MORTIMER L. DOWNEY
INTELLIGENT INTERMODAL SYSTEMS CONFERENCE

GENERAL SESSION WELCOME
NEW YORK, NEW YORK
OCTOBER 14, 1994

I'd like to welcome all of you to the Intelligent Intermodal Systems Conference — a meeting which focuses on two of our highest priorities at the Department of Transportation.

Before I begin my remarks, I'd like to thank ITS AMERICA and the I-95 Corridor Coalition for co-sponsoring the conference. I want to commend their commitment to focusing public attention on issues that are going to define the future of transportation.

Intelligent transportation systems and intermodalism may have been just buzz words in the past. Tomorrow, they will be real solutions to increasing travel demand and limited public resources.

They also will help us achieve the national goals Secretary Peña set forth in our Strategic Plan in the areas of safety, air quality, energy conservation and greenhouse gas emissions.

Progress on Intelligent Transportation Systems

USDOT — together with ITS AMERICA — has accomplished much in a short time as we begin to build an intelligent transportation systems industry.

We have invested hundreds of millions of dollars in intelligent transportation projects, and our field testing has given tremendous credibility to the budding intelligent transportation systems industry. Most of the major defense contractors now see ITS as a significant opportunity for civilian commercial work.

Our programs also have drawn substantial private sector involvement, but an ever greater private sector role is necessary if we are to have widespread deployment in the near future.

Nearly half of the stated departments of transportation — agencies traditionally concerned more with road construction and maintenance — have participated in the early field tests, thereby involving a key group of players.

And finally, our programs have attracted telecommunications and consumer products and service companies to the field, providing the same customer-driven focus we're instilling at the federal level as the Clinton-Gore Administration reinvents government.

Toward An Intermodal Transportation System

USDOT also has made strides toward developing a true intermodal transportation system — something which previously was only the subject of dry reports by a few visionary planners.

We have increased funding flexibility between modes, worked toward unifying planning processes and proposed a National Highway System which will be the basis of an intermodal National Transportation System.

Over the next year we will define and identify this National Transportation System in cooperation with both the public and private sectors, and we will plan to use it to shape federal transportation investments into the next century.

The Links Between Intelligent Systems and Intermodalism

There has been a lot said — and done — about intelligent systems and intermodalisms, but, for the most part, they've been thought of as separate issues.

However, it's increasingly clear that intelligent systems and intermodalism must work together. We can't fall into the trap of developing intelligent systems for only one mode — or of believing that intermodalism can be truly effective without the control strategies and information capabilities available through advanced technology.

We'll never get maximum value from either intelligent systems or intermodalism if we go down separate paths — indeed, ITS will make intermodalism possible on a broad scale by breaking down the barriers between modes. There has been too little said about integrating intelligent transportation systems and intermodalism at an early stage.

That's why today's conference is so important: it focuses the dialogue on these issues simultaneously, and emphasizes their linkages. Throughout the day you're going to hear a great deal from people with quite different viewpoints. I won't step on their lines now, but instead, I want to sound three themes for today's discussions.

The Need to Deploy Systems Now

First, we must focus on deploying intelligent intermodal systems — not just on theoretical research — that actually get projects on the street quickly to serve all our customers.

The first major technology out of the box is the exchange of travel information among transportation and public safety agencies. I stress the word "travel" — not traffic information — the information that allows our customers to make informed choices about all aspects of travel — mode, route, time, et cetera.

We already have a pioneering example of this right here in the New York-New Jersey area: TRANSCOM.

TRANSCOM has been so successful because it brings together 15 different public agencies and helps them communicate — using currently available information — to exchange intelligence on traffic incidents and construction.

We must have similar cooperation in metropolitan areas throughout the nation, and we must go beyond providing information to public agencies and get it to the public. TRANSCOM's leaders know that and are moving ahead with next-generation ITS projects.

The Need For A Customer Focus

The second point I'd like to make is the importance of focusing less on the technology of data collection and dissemination and more on whether customers will actually use the information, and what effect their use of it will have on travel behavior. We must understand how these projects can directly benefit travelers and assure those benefits are being delivered.

Another Northeastern success story demonstrates the direction we need to move in. The SmarTraveler project covers 122 cities over 1,400 square miles in eastern Massachusetts. It's an advanced traveler information system offering free, real-time, route specific traffic and transit information to anyone with a touch-tone telephone.

SmarTraveler now services 1.5 million calls annually and is growing at the rate of 160 percent a year. User satisfaction, as measured by independent surveys we required, is very high, with 85 percent of users rating the service at 8 or better on a scale of 10 and with a remarkable 97 percent expecting to use the service again. We've extended our sponsorship of this project to continue testing customer acceptance.

We also want to see whether a relatively simple, private, cost-effective data collection and dissemination system like SmarTraveler might do the job for certain areas — although maybe not the largest Northeast corridor cities.

The Need For Early Public Sector Leadership

The third point I want to make is, while a strong role for the private sector is critical, success for intelligent transportation systems in the short term requires public sector sponsorship and close interagency coordination.

As we move on to widespread deployment, we recognize success in the years to come will depend mainly on the play of private, free-market forces.

Roles for the Federal Government

In the early stages, we in the federal government see two clear roles for the public partners, especially at the federal level.

The first is as a catalyst, a source of seed money and expertise from the great federal laboratories that won the Cold War and the race to the moon.

This work is going to be intermodal in focus. That's why it's intelligent transportation systems and not just intelligent vehicle/highway systems.

Within DOT, it's not just an FHWA effort, but one in which the FTA, the FRA and the National Highway Traffic Safety Administration are all a part of our ITS leadership under the ITS Joint Program Office led by Chris Johnson.

A second key role is that of a standard setter — forging consensus on national and even international standards. These standards will create a "common ground" that will encourage new entrants and spur competition, while the "open architectures" we support allow the new technologies to adapt, stay flexible and accommodate further progress.

This is an absolutely critical leadership role that the federal government must play because no one else can or will.

The Promise of Intelligent Intermodal Systems

We've had some genuine successes at building the foundations for an ITS industry. Indeed, this is an area where the United States can be the world leader, first, by developing these technologies and creating a multi-billion dollar market for American products, and second, by reducing our transportation costs and giving us a real competitive advantage over our global competitors.

These successes are just the beginning.

The intelligent transportation systems I envision will let trucks cross borders without stopping, cut traffic congestion and improve safety and air quality, provide in-vehicle navigation aides, collision avoidance systems and vehicle identification chips to track deliveries and frustrate thieves.

These systems will allow full integration of all forms of transportation, so travelers will be able to move seamlessly from one mode to another, using a single form of payment.

Sooner than most of us dare to believe possible, ITS technologies will lay the groundwork for the fully automated highways of the 21st Century.

Indeed, just last week Federal Highway Administrator Rodney Slater announced the formation of the National AHS Consortium, led by General Motors, which will carry out a $200 million project to develop automated highway systems.

We're going to prove the concept of automated highway systems works by having driverless cars operate over a test track within three years.

It may well be 15 or 20 years before truly automated public roads become a reality. In the meantime, we'll benefit in the near future from advances made possible by the intermediate steps and from spin-offs.

The future is coming ... soon.

Conclusions

So today, I urge you to consider these themes — getting projects deployed quickly, keeping in mind the customer focus, remembering the importance of public sector sponsorship and close interagency coordination.

As we begin our discussions of difficult, complex issues, let me close with a quotation by astronaut — now United States Senator — John Glenn:

"People are afraid of the future, of the unknown. If we face up to it and take the dare of the future, we can have some control over our destiny."

That's an exciting idea to me, better than waiting with everyone else to see what's going to happen.

I can't think of a better thought with which to begin this conference.

FOR IMMEDIATE RELEASE   DOT 04-96
Wednesday, January 10, 1996   Contact: Cindy McMickens, ITS/Joint Program Office
                                     202/366-9536
                                     -or- Wendy Burt, Office of the Secretary, 202/366-5565

PEÑA ANNOUNCES NATIONAL INITIATIVE TO BUILD INTELLIGENT TRANSPORTATION INFRASTRUCTURE

Washington - Forty years ago President Eisenhower and the Congress paved the way for a better quality of life for future generations by signing a law creating the federal interstate highway system. As the 21st century approaches, the U.S. Department of Transportation is looking to use technology as the means to build the transportation infrastructure needed to improve the quality of life for future generations.

With *Operation TimeSaver,* Transportation Secretary Federico Peña today launched a new initiative designed to cut the daily travel time of Americans living in congested metropolitan areas by 15 percent over the next ten years, and give that time back to Americans.

"I believe it's time we set a new surface transportation goal," Secretary Peña said during a speech to the Transportation Research Board annual meeting in Washington, D.C. "Let us set a national goal: To build an Intelligent Transportation Infrastructure across the United States, within a decade, to save time and lives and improve the quality of life for Americans."

"Commuting two and three hours a day takes away time Americans could spend on the job, or at home with the kids, or exercising, or reading," Peña explained. With *Operation TimeSaver,* Americans who commute just two hours a day would save 80 hours a year, the equivalent of two weeks work.

Operation TimeSaver challenges state and local transportation planners to "buy smart" by investing in an arsenal of new technological tools to keep the flow of people and goods moving more smoothly, safely, and with less impact on the environment.

The Intelligent Transportation Infrastructure (ITI) includes:

- The latest traffic information at your fingertips through your home computer, cable television, kiosk, telephone, car phone or beeper;
- Traffic control centers that use radar beacons, closed circuit video cameras, and in-road sensors to monitor major roadways and arterials and then provide up-to-the-minute traffic and road condition information to travelers;
- Enhanced dispatch systems that can quickly detect crashes or breakdowns and alert emergency service providers; and
- Smart emergency response vehicles that can send a message to a traffic signal to stay green so they can pass through an intersection.

Peña cited the following areas where transportation planners are laying the foundation for the ITI, and people are already noticing the difference:

- In Seattle, an advanced freeway management system has increased interstate speeds by up to 20 percent, reducing travel time by 50 percent;
- Minnesota Guidestar has Minneapolis/St. Paul residents driving 35 percent faster during rush hour, cutting their commute dramatically; accident rates have dropped 25 percent; emergency response time is down by 20 minutes; and the freeway capacity has increased by 22 percent;
- In Boston, commuters are using SmarTraveler communications systems to get current traffic information over home phones and car phones. Fifty-nine percent of users said using the service saved them time; and
- In Houston, congestion has actually declined since 1984 as a result of an integrated network of traffic control systems called TransStar.

"I am setting today a tangible measurement to focus our attention where congestion is the worst: our cities and suburbs," Secretary Peña said. "I want 75 of our largest metropolitan areas with a complete Intelligent Transportation Infrastructure in 10 years. And let us make a similar commitment to upgrade technology of 450 other communities, our rural roads, and interstates."

"Businesses lose $40 billion a year due to congestion. Just to stay even with the growth of congestion, we would need to build 34 percent more highway capacity," Peña said. "Over the next decade, for just 50 cities, that would cost $150 billion. For the same 50 cities, implementing an intelligent infrastructure, from virtually scratch, would cost $10 billion and increase capacity by two-thirds."

Currently, federal transportation funding to states can be used to build almost 100 percent of the ITI, and many states are using federal funds for those purposes. In addition, state and local communities annually budget additional appropriations for the upkeep and replacement of their current systems. With *Operation TimeSaver*, the federal government will offer advice to these communities on the most efficient way for them to use their already existing funds to meet the program goal.

Building the ITI won't mean excessive costs to communities, Peña stressed, adding that DOT's efforts to encourage private sector partners to invest in infrastructure projects will continue. This allows states to count private sector funds toward their required share of construction project funding.

"Our world is changing at an extraordinary pace. No one can predict what it will be like 10 years from now," Peña said. "This country will always build great highways. But if we just think in terms of concrete and steel, we'll miss out on the global communications revolution. *Operation TimeSaver* is one step towards making our highways safer and less congested in the 21st century, and giving our citizens more time to enjoy a better quality of life."
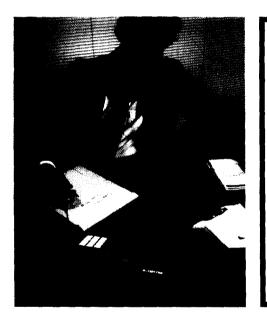
SmartRoute
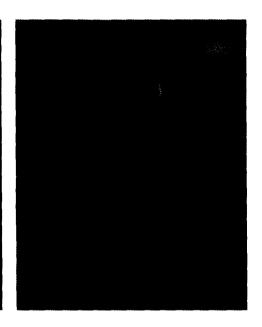S Y S T E M S

traveler information services

Severe weather
wasn't anticipated
in flying to the busi-
ness meeting. Hey,
it was sunny when
she left home.

THE PROBLEM...
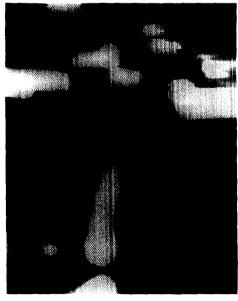EVERYDAY TRAVEL IS OFTEN A TIME CONSUMING TRIP
TO THE UNKNOWN.

Unknown streets cause the sales manager to be 30 minutes late for a presentation. Those directions over the phone sounded good.

Terrible traffic congestion prevents the parents from seeing his first goal. Who knew a truck would jackknife?

THE SOLUTION...
ITS ABOUT TIME, AND THE CONTROL OF TIME.

SmarTraveler

information, content, programming

That's what SmartRoute Systems provides in Traveler Information. We collect, process, and deliver a broad range of traveler information to consumers through existing and evolving electronic media.

The service is called SmarTraveler™ and it's part of the new industry of Intelligent Transportation Systems. Through the use of technology, the SmarTraveler service takes the mystery and uncertainty out of every-day travel and gives people more control over their mobile lives.

SmartRoute Systems' proprietary databases of traveler information reside in Travel Data Servers in our regional operations centers. Through multi-media channels, consumers can access the SmarTraveler service—from the home, office, and vehicle—to get useful information such as:

○ Route-specific, real-time traffic and transit information

○ Up-to-date weather conditions

○ Turn-by-turn street directions

○ Real-time flight arrival and departure times

○ Rental car, hotel, restaurant, and entertainment listings

○ And more...

The SmarTraveler service of SmartRoute Systems even has patented "intelligent agent" technology that further automates the process of delivering important and specific information to consumers. Individuals can be called, paged, or e-mailed to be informed about select traveler information such as major traffic jams, severe weather, and canceled airline flights.

HOW DOES IT ALL WORK?
THE SMARTRAVELER OPERATIONS CENTER

At a SmartRoute Systems Operations Center, a sophisticated network of electronic sensors, cameras, mobile probes, GPS systems, aircraft surveillance, and links with multi-modal public transportation agencies transmits information to our Travel Data Servers for processing.

This information is then packaged and delivered to consumers through leading telecommunications and content service providers. These are the strategic partners of SmartRoute Systems.
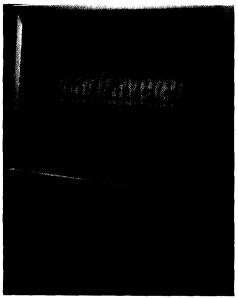
In-Vehicle Communications Systems
Broadband Networks
Direct Broadcast Satellite
Interactive TV
Cable TV
World Wide Web
On-Line Services
Specialized Mobile Radio
Personal Communications Services
Cellular Telephone
Landline Telephone
Paging
Television
Radio

SmarTraveler

SMARTRAVELER...
AN INTEGRATED MULTIMEDIA DATABASE OF TRAVELER
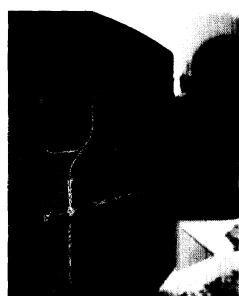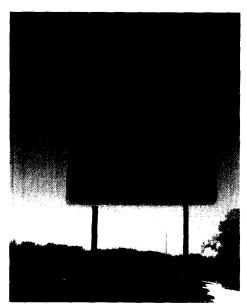INFORMATION DELIVERED TO PEOPLE WHEREVER THEY
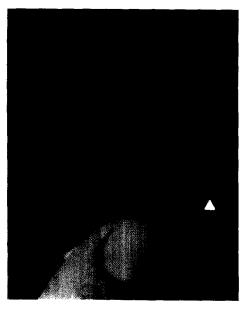ARE... FOR WHEREVER THEY'RE GOING.
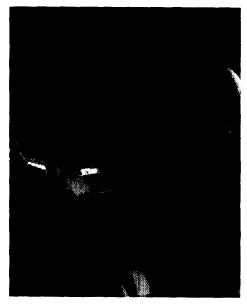
Home

Office
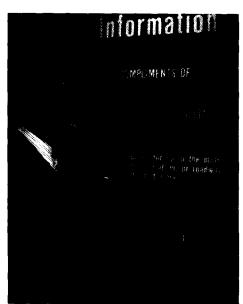
Vehicle

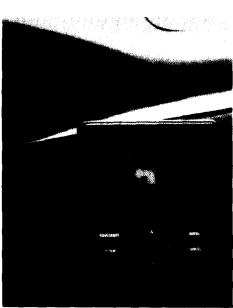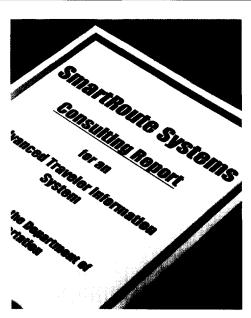Information

consulting, design, operations

SmartRoute Systems' Public Sector Division works with city, state, and regional transportation agencies to plan and implement Advanced Traveler Information Services, or ATIS. Our services include feasibility studies, consulting reports, and full scale public/private partnership design and operations.

SmartRoute Systems makes technology work for the public sector, enhancing transportation mobility and improving air quality, while deploying self-sustaining economic models which transfer public sector costs to the private sector.